

* KERRINT *

Work Order ID 159400

159400

Item ID: 646.4001 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: AS350 Cable Cutter System
Start Date: 7/10/2017 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 7/17/2017 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: [Signature] Date: JUL 05 2017 Tooling: Date: Run Start *NR1*
QC: [Signature] Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.4000	C1								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP 646.4001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.03							
Quality Control									

DAS
6
9-89

JUL 10 2017

DAS
28
9-89

JUL 17 2017

JUL 12 2017

DAS
6

DAS
27
9-89

DAS
28
9-89

JUL 17 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
								OTHER :	

Work Order ID 159400

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159400

Page 2

Item ID: 646.4001 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AS350 Cable Cutter System
Start Date: 7/10/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/17/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>Fg101</u>	0.00							
130	Packaging						DAS	JUL 14 2017	
	Memo	0.00					28		
	Identify and pack for shipping as per PPP 646.4001						9-89		
	Location: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.10							
Quality Control									


JUL 17 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

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Page 1

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.23 NEW ISSUE DD VERF:JLM
IPP REV:B 15.01.08 AS PER DWG REV.B DD VERF:JLM IPP
REV:C 16.01.07 AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

600.0129

Purchased

No

100

f

232.0000

8

8

600 0129

VHB TAPE 75935A651

**

JUL 12 2017

DAS 27
9-89

Location

Loc Qty

Loc Code

CCK096

232

m135867

16

m137700

216

600.0990

Purchased

No

100

Each

29.0000

1

1

600 0990

Magnabond 6398 Part A Size 112 ml

**

DAS 27
9-89

Location

Loc Qty

Loc Code

PKG

29

M136586

1

M136862

1

M137073

6

M137495

10

M137712

11

exp. 02/01/2018

DAS 28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

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Page 2

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

600.0991 Purchased No

100 Each 30.0000 1 1

600 0991

Magnabond 6398 Part B Size 112 ml

**

DAS
27
9-89

Location

Loc Qty

Loc Code

PKG

30

m136586

2

m136862

1

m137073

6

m137495

10

m137712

11

m134249

0

1/1/2017

600.1012 Purchased No

100 Each 18.0000 1 1

600 1012

Sealant PR1425B2 (#654 sem)

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

cck017

18

m137371

4

m137699

14

600.1013 Purchased No

100 Each 75.0000 5 5

600 1013

021200-3M TAPE PRIMER 94 PRIMER 24216

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK096

75

m137150

25

m137500

50

646.2910 Manufactured No

100 Each 9.0000 1 1

646 2910

Deflector

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK050

9

155356

3

160183

6

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Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Page 3

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3001

Manufactured No

100

Each

5.0000

1

1

646 3001

Lower Cable Cutter Assembly

**

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

cck023

5

162252

3

2/8/2019

161804

2

4/21/2019

646.3110

Manufactured No

100

Each

1.0000

1

1

646 3110

Channel

**

DAS JUL 12 2017

6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

1

159544

1

646.3210

Manufactured No

100

Each

5.0000

1

1

646 3210

Support

**

DAS
6 JUL 12 2017

9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

5

157802

5

646.3301

Manufactured No

100

Each

8.0000

1

1

646 3301

Upper Cutter Assembly

**

DAS
6
9-89

JUL 12 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

cck018

8

159679

4

4/10/2018

160062

4

2/12/2019

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

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Page 4

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3510

Manufactured No

100

Each

1.0000

1

1

646 3510

Strut

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

1

156767

1

100

Each

7.0000

1

1

646.3511

Manufactured No

646 3511

Strut

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

1

157789

1

CCK108A

6

161216

6

100

Each

8.0000

1

1

646.3610

Manufactured No

646 3610

Filler

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

8

156880

8

100

Each

12.0000

1

1

646.3710

Manufactured No

646 3710

Doubler

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK006

12

152594

12

DAS
6
9-89

DAS
27
9-89

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

JUL 12 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

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Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3711
646 3711
ClipDAS
28
9-89

Manufactured No

100 Each

7.0000

1

1

**

DAS
6
9-89JUL 12 2017
DAS
27
9-89LocationLoc QtyLoc Code

cck104

7

156840

1

159504

6

646.3712
646 3712
ClipDAS
28
9-89

Manufactured No

100 Each

33.0000

1

1

**

DAS
6
9-89JUL 12 2017
DAS
27
9-89LocationLoc QtyLoc Code

cck104

33

156884

3

159863

30

646.3713
646 3713
GussetDAS
28
9-89

Manufactured No

100 Each

31.0000

1

1

**

DAS
6
9-89JUL 12 2017
DAS
27
9-89LocationLoc QtyLoc Code

cck105

31

156776

3

159851

28

646.3714
646 3714
GussetDAS
28
9-89

Manufactured No

100 Each

31.0000

1

1

**

DAS
6
9-89JUL 12 2017
DAS
27
9-89LocationLoc QtyLoc Code

cck105

31

156761

3

159846

28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #:		QTY Effective :			MRB (QSI042) Approval		
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								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

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Page 7

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3810 Manufactured No

100 Each 11.0000 2 2

646 3810

Bracket

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK106

11

160379

11

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

646.3811 Manufactured No

100 Each 8.0000 1 1

646 3811

Radius Block

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK106

8

160090

8

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

646.3812 Manufactured No

100 Each 24.0000 2 2

646 3812

Gusset Bracket

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK106

9

159539

9

CCK108A

15

160378

15

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

646.3813 Manufactured No

100 Each 9.0000 1 1

646 3813

AS350 Strut Bracket

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK106

9

157787

4

159545

5

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER :							
Misidentified ☐	☐ Past Due								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.9410	Manufactured	No	100	Each	50.0000	1	1	JUL 12 2017	DAS 28 9-89	DAS 27 9-89
646 9410						**				
Shim										
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			cck011	50						
			140671	50						
647.0112	Manufactured	No	100	Each	66.0000	2	2	JUL 12 2017	DAS 28 9-89	DAS 27 9-89
647 0112						**				
Strut Bracket										
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			CCK106	66						
			159844	21						
			161667	45						
647.7703	Manufactured	No	100	Each	15.0000	2	2	JUL 12 2017	DAS 28 9-89	DAS 27 9-89
647 7703						**				
Strut Assembly										
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			CCK114	15						
			159680	1						
			160493	14						
650.9201	Manufactured	No	100	Each	18.0000	2	2	JUL 12 2017	DAS 28 9-89	DAS 27 9-89
650 9201						**				
Eyelet Bracket Assembly										
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			cck127	18						
			156828	8						
			157798	10						

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

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Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

AN3-11A Purchased No 100 Each 146.0000 10 10

AN3-11A

Bolt

**

DAS 11 12 2017

DAS 27

DAS 28 9-89

Location

Loc Qty

Loc Code

over003

100

m136192

100

ST349

46

153855

46

AN3-12A Purchased No 100 Each 174.0000 2 2

AN3-12A

Bolt

**

DAS 6 9-89 JUL 12 2017

DAS 27

DAS 28 9-89

Location

Loc Qty

Loc Code

ST349

174

153854

174

AN3-13A Purchased No 100 Each 56.0000 1 1

AN3-13A

Bolt

**

DAS 6 9-89 JUL 12 2017

DAS 27

DAS 28 9-89

Location

Loc Qty

Loc Code

GA

11

m127070

11

ST349

45

m137886

45

AN316C4R Purchased No 100 Each 47.0000 2 2

AN316C4R

Nut, Jam

**

DAS 6 9-89 JUL 12 2017

DAS 27

DAS 28 9-89

Location

Loc Qty

Loc Code

ST331

47

m137736

47

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								

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Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

CR3213-5-3 Purchased No

100 Each 198.0000 14 14

CR3213-5-3

Cherry Rivet

**

DAS
6
9-89

DAS
27
9-89

JUL 12 2017

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK003

100

m137736

100

ST319

98

m137320

58

m137391

40

14

DAS
6
9-89

MS20426AD5-7 Purchased No

100 Each 1,352.000 2 2

MS20426AD5-7

RIVET

**

JUL 12 2017

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK004

703

153848

703

ST311

649

M133922

649

2

DAS
6
9-89

DAS
27
9-89

MS20470AD5-5.5 Purchased No

100 Each 614.0000 8 8

MS20470AD5-5 5

Rivet

**

JUL 12 2017

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

614

m134063

614

8

DAS
6
9-89

DAS
27
9-89

MS20470AD5-6 Purchased No

100 Each 504.0000 8 8

MS20470AD5-6

RIVET

**

JUL 12 2017

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

504

124089

504

8

DAS
6
9-89

DAS
27
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : ☐							

Picklist Print

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Page 14

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS20470AD5-7

Purchased

No

100

Each

335.0000

3

3

MS20470AD5-7

Rivet

**

JUL 12 2017

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST309

335

123425

335

3

MS21042-08

MS21042L08

Purchased

No

100

Each

0.0000

2

2

MS21042-08

USE MS21042L08

**

JUL 12 2017

DAS 27 9-89

DAS 28 9-89

MS21042-3

MS21042L3

Purchased

No

100

Each

0.0000

2

2

MS21042-3

Nut

**

JUL 12 2017

DAS 27 9-89

DAS 28 9-89

MS21042L3

Purchased

No

100

Each

1,379.000

61

61

MS21042L3

Nut

**

JUL 12 2017

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

FP001

79

m135945

79

GA

394

m134360

102

M136665

292

ST303

906

m137680

406

m137886

500

61

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Page 14

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								

Picklist Print

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Page 15

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

100

Each

1,899.000

2

2

MS21042L4

Nut

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

10

m133363

10

GA

51

m135058

51

OVER007

1000

m137680

1000

ST303

838

m137402

400

m137544

438

2

MS21047-3

Purchased

No

100

Each

183.0000

18

18

MS21047-3

Nut Plate

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

183

m137459

83

m137710

100

18

MS24693-C278

Purchased

No

100

Each

100.0000

5

5

MS24693-C278

Screw

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST287

100

m137680

100

5

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Page 16

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS24694-S51

Purchased

No

100

Each

220.0000

5

5

MS24694-S51

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST284

220

m136866

220

MS24694-S54

Purchased

No

100

Each

146.0000

2

2

MS24694-S54

SCREW

DAS
28
9-89

Location

Loc Qty

Loc Code

ST284

146

153846

46

m137951

100

MS24694-S55

Purchased

No

100

Each

260.0000

3

3

MS24694-S55

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST283

260

153847

160

m137951

100

MS27039-08-13

Purchased

No

100

Each

257.0000

2

2

MS27039-08-13

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST278

257

153849

257

**

JUL 12 2017

DAS
27
9-89

**

JUL 12 2017

DAS
27
9-89

**

JUL 12 2017

DAS
27
9-89

**

JUL 12 2017

DAS
27
9-89

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Page 16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

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Page 17

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

100

Each

170.0000

2

2

MS27039-1-10

SCREW

**

JUL 12 2017

DAS
27
9-89
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

15

m129541

15

over006

119

m137736

119

ST280

36

m137164

6

m137597

30

2

MS27039-1-12

Purchased

No

100

Each

107.0000

6

6

MS27039-1-12

Screw

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

107

m137320

15

m137736

92

6

MS27039-1-16

Purchased

No

100

Each

147.0000

24

24

MS27039-1-16

Screw

**

JUL 12 2017

DAS
627
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

over006

50

m137061

50

ST280

97

m137320

19

m137736

78

21

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Page 17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								

Picklist Print

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Page 18

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-19

Purchased

No

100

Each

283.0000

22

22

MS27039-1-19

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

80

m134134

80

ST280

203

m137361

203

MS27039-1-20

Purchased

No

100

Each

57.0000

2

2

MS27039-1-20

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

57

m136554

57

MS27039-1-21

Purchased

No

100

Each

115.0000

4

4

MS27039-1-21

Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

115

m127904

115

NAS1149F0332P

Purchased

No

100

Each

2,204.000

144

144

NAS1149F0332P

Washer

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

275

m133709

275

ST262

1929

m137710

1929

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Page 18

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 19

Work Order ID: 159400

159400

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017

Required Date: 7/17/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0363P

Purchased

No

100

Each

226.0000

2

2

NAS1149F0363P

WASHER

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST262

226

124555

26

m137544

200

2

NAS1149F0432P

Purchased

No

100

Each

1,085.000

4

4

NAS1149F0432P

WASHER

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST260a

1000

M137412

1000

ST262

85

M137361

85

4

NAS1149FN832P

Purchased

No

100

Each

2,530.000

4

4

NAS1149FN832P

Washer

**

JUL 12 2017

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

358

M135058

208

M136182

40

M136866

110

ST260a

1500

M137820

1500

ST263

672

M137412

672

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.		05304		SHEET 1 OF 1									
DWG NO.	646.4000	REV:	C	PREPARED BY	J. BECKER	DATE:	02/04/16	EFFECT ON DWG ☐ INC. ☒ UNINC.					
DWG TITLE: AS350 CABLE CUTTERS KIT													
APPROVED BY:		ENGR.			MFG			QC			EFF.	NEXT ORDER	
TRANSACTION CODES (TC): A-ADD R-REVISE		REASON: REVISED F/N 12.										ECR: N/A	
												ACTION ITEM: 1. N/A	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 159400

JUL 05 2017

SHEET 1, BOM IS:

12	R	601.1624	8	16	LOCKNUT	MS21042L3	
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL	SPECIFICATION
		QTY					
DOCUMENTS EFFECTED:					CHANGE CATEGORY		DER REVIEW REQUIRED
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR		☐ YES ☒ NO

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NOTES:

1. AFTER INSTALLATION APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2. INSTALL F/N 14 WITH F/N 52 & 53.

3. 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 75935A651.

4. 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

5. REUSE FASTENERS FROM F/N 1.

6. USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7. AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8. INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

9. NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(S)

05304

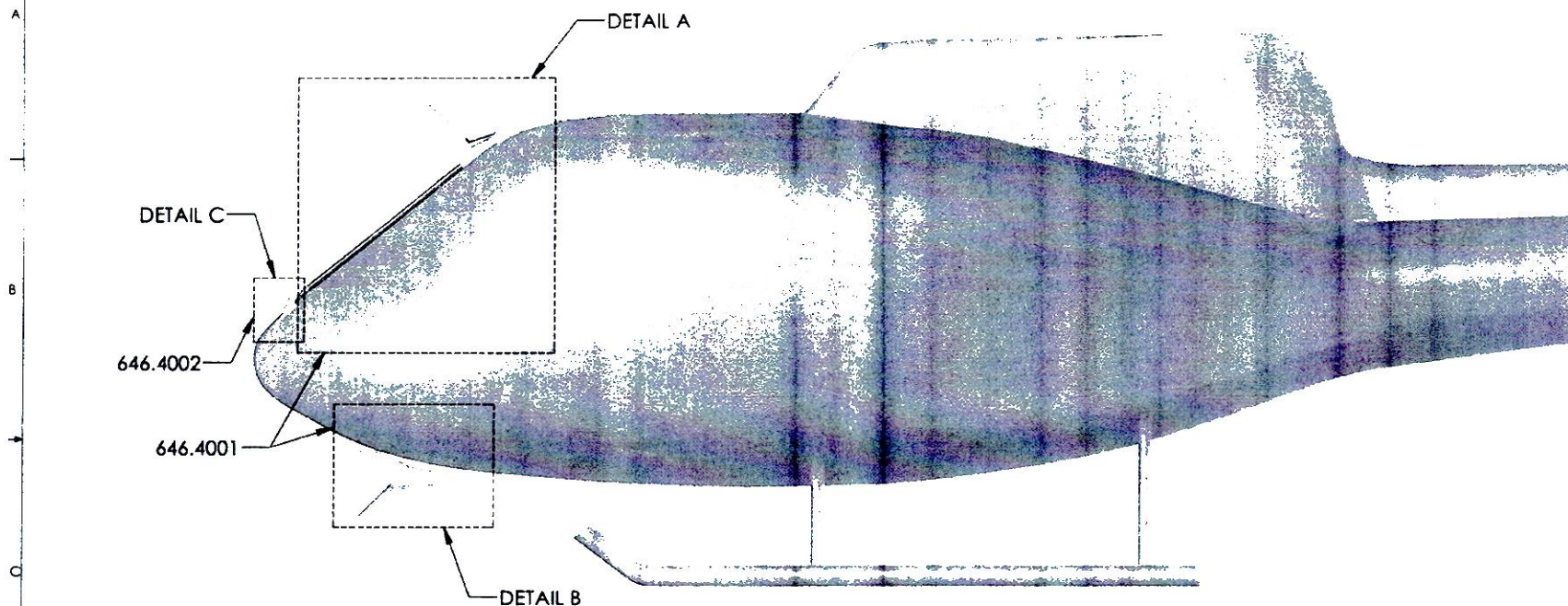
5	5	5	78	601.3875	SCREW	MS27039-1-10				
1	1	1	77	646.9410	SHIM		△			
	4	4	76	601.2764	WASHER	NAS1149N832P				
	2	2	75	601.2973	LOCKNUT	MS21042-08				
	2	2	74	601.2988	SCREW	MS27039-0813				
	2	2	73	601.2943	LOCKNUT	MS21042-3				
	2	2	72	601.3128	NUT	AN316C4R				
	2	2	71	601.3209	LOCKNUT	MS21042-4				
	4	4	70	601.2638	WASHER	NAS1149N832P				
	2	2	69	601.2669	BOLT	ANAC7A				
	2	2	68	601.3119	CLEVIS	AN665-34R				
	2	2	67	601.3121	EYE BOLT	AN46-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
	REF	REF	65	647.5701	GPS MOUNT KIT		△			
			64	601.3151	WASHER	NAS1149N832P				
		2	63	601.2911	SCREW	MS2448-4553				
		24	62	601.2637	SCREW	MS27039-1-16				
2	2	2	61	601.2763	BOLT	AN3-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PR-1423 CLASS B				
	1	1	53	600.0991	MAGNABOND 639B PART B		△			
	1	1	52	600.0990	MAGNABOND 639B PART A		△			
6	10	10	51	601.2826	BOLT	AN3-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS27039-1-18				
2		2	48	601.1365	SCREW	MS27039-1-10				
2		2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	2	44	601.1948	SCREW	MS27039-1-19				
	2	2	43	601.1952	SCREW	MS27039-1-20				
	4	4	42	601.1956	SCREW	MS27039-1-21				
4006	4005	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 0199, 0281, 0277 & 0276	05/02/2010	P. BRAYO
B	INCORPORATED ECN 0284, 0279 & 0473	1/04/2014	P. BRAYO
C	INCORPORATED ECN 0285	01/01/2015	P. BRAYO

		2		2	41	601.2829	SCREW	MS2469-4554	
		2		2	40	601.2831	RIVET	MS20476AD5-7	
		1		1	39	646.3716	GAUGE BRACKET		
		6		6	38	601.1953	SCREW	MS27039-1-12	
	2	2		2	37	646.3715	STRUT DOUBLER		
	2	2		2	36	601.2824	BOLT	AN3-5A	
12	36			36	35	601.2277	RIVET	CC39M45-340	
6	18			18	34	600.0795	NUTPLATE	MS21047-3	
3	3			3	33	601.2565	RIVET	MS20476AD5-7	
1	1			1	32	646.3813	STRUT BRACKET		
4	4			4	31	601.2822	BOLT	AN3-3A	
2	2			2	30	646.3812	GUSSET BRACKET		
8	8			8	29	601.2564	RIVET	MS20476AD5-6	
1	1			1	28	646.3714	GUSSET		
	1	1		1	27	646.3610	FILLER		
	3	3		3	26	601.2830	SCREW	MS2469-4555	
	2	2		2	25	601.2825	BOLT	AN3-6A	
	1	1		1	24	646.3811	RADIUS BLOCK		
	1	1		1	23	646.3712	CLIP		
	1	1		1	22	646.3711	CLIP		
8	8			8	21	601.2832	RIVET	MS20476AD5-5	
14	14			14	20	601.2020	RIVET	CK3213-5-3	
4	6	4	6	10	19	601.2823	BOLT	AN3-4A	
	1	1		1	18	601.2827	BOLT	AN3-13A	
	5	5		5	17	601.2912	SCREW	MS2469-4551	
1	1			1	16	646.3713	GUSSET		
1	1			1	15	646.3210	SUPPORT		
	1			1	14	646.3710	DOUBLER		
	1	1		1	13	646.3110	CHANNEL		
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21042L3
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149N832P
					10	646.3410	LH WIPER DEFLECTOR		
					9	646.3411	RH WIPER DEFLECTOR		
				2	2	8	647.7703	STRUT ASSY	
				2	2	7	647.0112	STRUT BRACKET	
		1	1	1	6	646.3511	STRUT		
		1	1	1	5	646.3510	STRUT		
2		2		2	4	646.3810	BRACKET		
			1	1	3	646.2910	DEFLECTOR		
		1	1	1	2	646.3001	LOWER CUTTER ASSY		
			1	1	1	646.3301	UPPER CUTTER ASSY		
X						646.4006	LOWER CUTTER FIRED PROVISIONS		
	X					646.4005	LOWER CUTTER REMOVABLE PROVISIONS		
		X				646.4004	FIXED PROVISIONS KIT		
			X			646.4003	CABLE CUTTERS KIT WITHOUT FIRED PROVISIONS		
				X		646.4002	AS350 WIPER DEFLECTOR KIT		
					X	646.4001	AS350 CABLE CUTTERS KIT		
.4006	.4003	.4004	.4003	.4002		FIND #	PART #	DESCRIPTION	MATL SPEC.

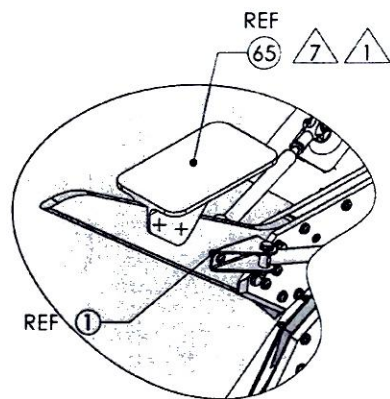
QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE: 08-27-08	
		DRAWN BY: P. BRAYO	
		CHECKED BY: P. BRAYO	
		DRAWING APPROVAL: P. BRAYO	
		DATE: 08/27/08	
		CONTACT NO.	
		UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES	
		TOLERANCES ARE:	
		2 PLACE DECIMALS ±.010	
		3 PLACE DECIMALS ±.005	
		ANGLES: 8°	
		DART 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
		AS350 CABLE CUTTERS KIT KIT CAGE CODE: 07M26 DWG NO: 646.4000 REV: C SCALE: NONE SHEET: 1 OF 5	

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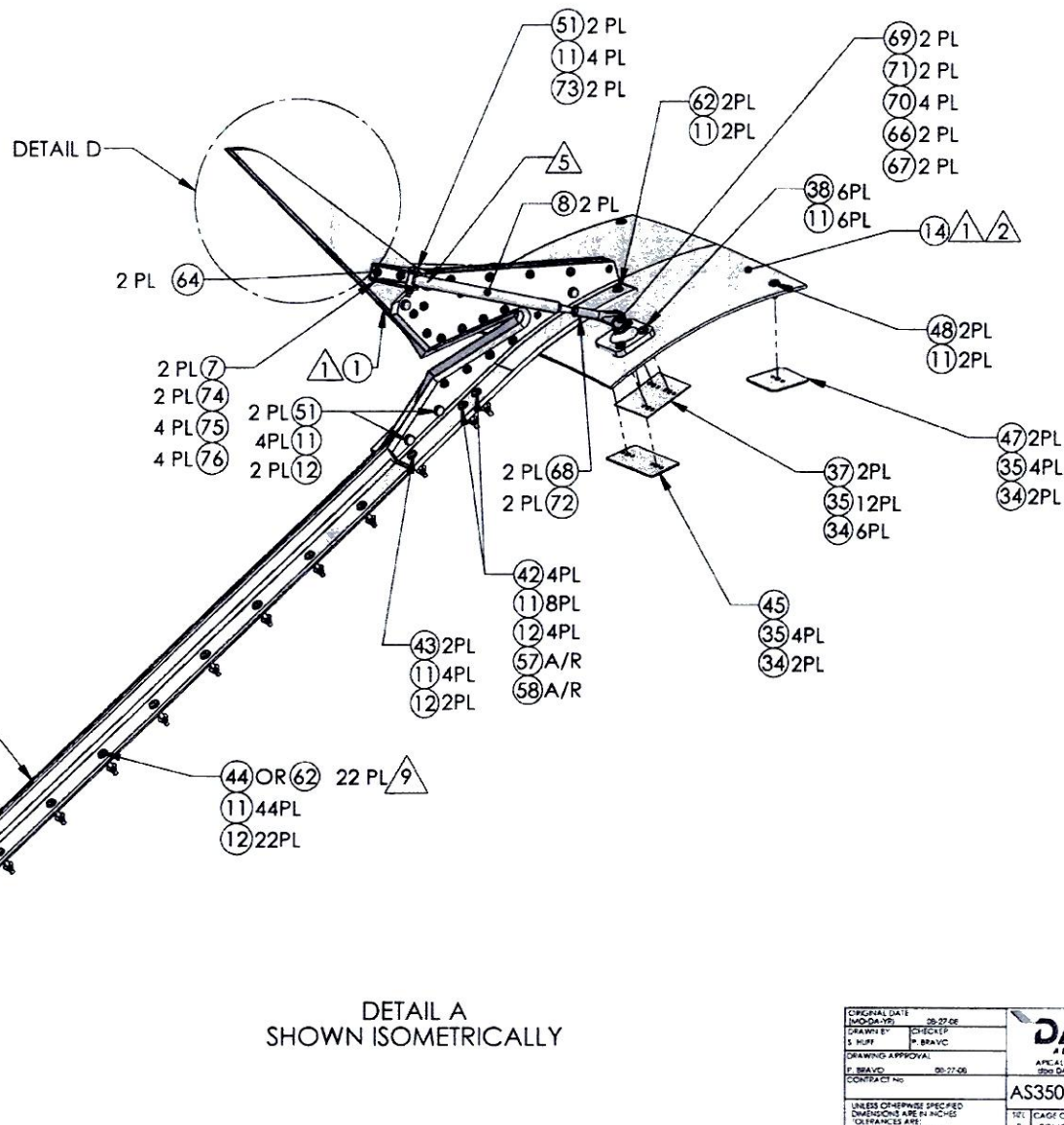


ORIGINAL DATE 10/24/08		3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300	
DRAWN BY S. HUFF	CHECKED P. BRAYO	DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. BRAYO			
CONTRACT NO. 080208		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 3 PLACE DECIMALS ± .010 ANGLES ± .5°		REV B	DATE CODE 07/14/16 DWG NO 646.4000 SCALE NONE
		REV C	SHEET 2 OF 5

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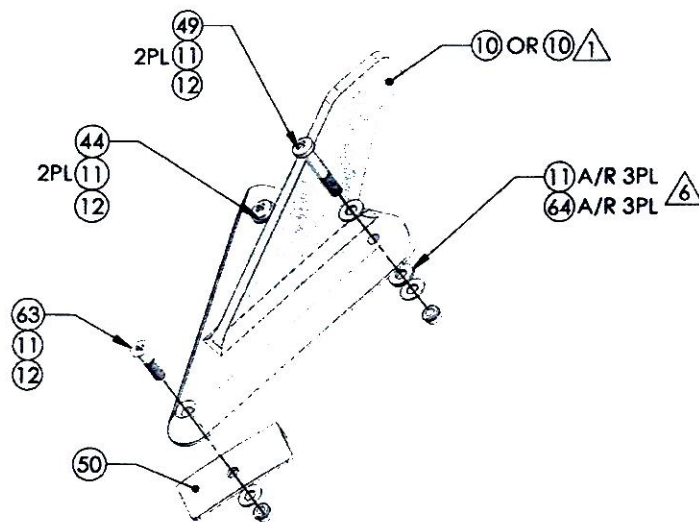
DETAIL D
TYPICAL GPS MOUNT KIT INSTALLATION



DETAIL A
SHOWN ISOMETRICALLY

GENERAL DATE 1/20/04-VIS	02-27-06	 DART AEROSPACE AERIAL INDUSTRIES INC. 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY S. HUNT	CHECKED BY P. BRAVO		
DRAWING APPROVAL P. BRAVO	02-27-06		
CONTRACT # C-10			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE:			
1/2 PLACE DIMENSIONS ± .01 3/4 PLACE DIMENSIONS ± .005 ANGLES ± .1°			
ASS350 CABLE CUTTERS KIT			
REV	DATE CODE	QWS NO	REV
1	07/28/6	646.4000	
SCALE: NONE		SHEET 3 OF 5	

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DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE 1/20/04-10/08/27/08		DART AEROSPACE 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300	
DRAWN BY S. HUNT	CHECKED P. BRAYO	APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWING APPROVAL J. BRAYO		AS350 CABLE CUTTERS KIT	
C-CONTRACT NO.		EST R	REV C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS: ±0.10 2 PLACE DECIMALS: ±0.05 ANGLES: ±.2°		QTY R	QTY C
SCALE: NONE		SHEET 5 OF 5	

SPEC.	Q506	Q505	Q504	Q503	Q502	Q501	Q500	Q499	Q498	Q497	Q496	Q495	Q494	Q493	Q492	Q491	Q490	Q489	Q488	Q487	Q486	Q485	Q484	Q483	Q482	Q481	Q480	Q479	Q478	Q477	Q476	Q475	Q474	Q473	Q472	Q471	Q470	Q469	Q468	Q467	Q466	Q465	Q464	Q463	Q462	Q461	Q460	Q459	Q458	Q457	Q456	Q455	Q454	Q453	Q452	Q451	Q450	Q449	Q448	Q447	Q446	Q445	Q444	Q443	Q442	Q441	Q440	Q439	Q438	Q437	Q436	Q435	Q434	Q433	Q432	Q431	Q430	Q429	Q428	Q427	Q426	Q425	Q424	Q423	Q422	Q421	Q420	Q419	Q418	Q417	Q416	Q415	Q414	Q413	Q412	Q411	Q410	Q409	Q408	Q407	Q406	Q405	Q404	Q403	Q402	Q401	Q400	Q399	Q398	Q397	Q396	Q395	Q394	Q393	Q392	Q391	Q390	Q389	Q388	Q387	Q386	Q385	Q384	Q383	Q382	Q381	Q380	Q379	Q378	Q377	Q376	Q375	Q374	Q373	Q372	Q371	Q370	Q369	Q368	Q367	Q366	Q365	Q364	Q363	Q362	Q361	Q360	Q359	Q358	Q357	Q356	Q355	Q354																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

9. AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
10. INSTALL F/N 14 WITH F/N 52 & 53.
11. 3M VHB ADHESIVE TAPE 025" THICK X 30" WIDE
VENDOR: MCMMASTER-CARR P/N 75935A651.
12. 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: 3M, HUGHES P/N D21200-24216.
13. REUSE FASTENERS FROM F/N 1.
14. USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.
15. AT CUSTOMER'S OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 17 SCREW.
16. INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 17 SCREW IN PLACE OF F/N 17 SCREW.
17. NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 36 IN PLACE OF F/N 41 WHEN NECESSARY.

NOTES:

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UNINCORPORATED ECN(S)

FOYSA

[illegible]

Work Order ID 159400

159400

Wednesday, July 05, 2017 2:43:46 PM

Item ID: 646.4001

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AS350 Cable Cutter System

Start Date: 7/10/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/17/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date: JUL 05 2017 Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

646.4000

C1

JUL 10 2017

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP 646.4001

CB

JUL 17 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

120

QC4 100% Inspect kits for completeness

0.00

120

QC

Memo

0.03

Quality Control

United States Of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate

Number SR02180LA

This Certificate issued to Apical Industries, Inc. dba Dart Aerospace
3030 Enterprise Court, Suite A
Vista, CA 92081

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified herein meets the airworthiness requirements of Part 27 of the Federal Aviation Regulations.*

**Certification basis is set forth in Type Certificate Data Sheet H9EU.*

Original Product Type Certificate Number: H9EU

Make: Eurocopter France

Model: AS350 C, D, D1, B, B1, B2, BA, B3

Description of Type Design Change: Installation of a Cable Cutter Kit in accordance with FAA approved Apical Master Document List, MD350-61, Revision A, dated November 25, 2008, or later FAA approved revision.

Limitations and Conditions: The installation should not be incorporated in any aircraft unless it is determined that the interrelationship between this installation and any previously approved configuration will not introduce any adverse effect upon the airworthiness of the aircraft. The approval of this modification applies to the above noted aircraft model series only. This approval requires the inspections and overhaul schedules to be performed as mandated by Apical Industries, Inc.'s Instructions for Continued Airworthiness, ICA350-61, Revision N/C, dated November 20, 2008, or later FAA accepted revision. A copy of this STC must be included in the permanent records of the modified aircraft. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: May 21, 2008

Date received: August 7, 2014

Date of issuance: December 16, 2008

Date amended:

By direction of the Administrator



Haifa Haj-Eid
(Signature)

Haifa Haj-Eid
Supervisor, Technical and Administrative
Support Staff
Los Angeles Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.